

# Fisher Population Analyses 2003

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## **Abstract**

Conservative fisher harvests during 1998-2000 allowed the fisher population to increase to near the established population goal of 9,200 fishers. Higher harvests during 2001 and 2002 appear to have stabilized the population. A harvest of 1,660 fishers was recommended for the 2003 season. This included a very conservative harvest (30 fishers) in newly established Fisher Management Zone E.

## **Methods**

In 2001, trappers in all zones were required to register their fishers at DNR stations and turn in the head at the same time. In 2002, only trappers in Zone E were required to surrender the head from their fisher. Date of harvest and harvest zone (Fig. 1) were recorded for each head. A canine tooth was extracted and sent to Matson's Lab, Milltown, MT for processing and aging. Ages were determined by counting annuli in the cementum. The sex of each fisher was determined from canine tooth measurements (Jenks and Bowyer 1984).

Fisher population estimates and trends were determined using Minnesota's Fisher Population Model and data obtained from harvest registration, carcass collections and the Winter Furbearer Track Counts. Kohn et al. (1993) described procedures and interpretations in detail for data collected during 1985-92.

The Fisher Population Model was refined in 1995-96. Major changes included adjustments to illegal harvest estimates during earlier seasons with low harvests, and direct use of track frequencies observed in Winter Furbearer Track Counts as an independent estimate of population trends. The model was then modified for application in each Fisher Management Zone in 1997.

## **Results**

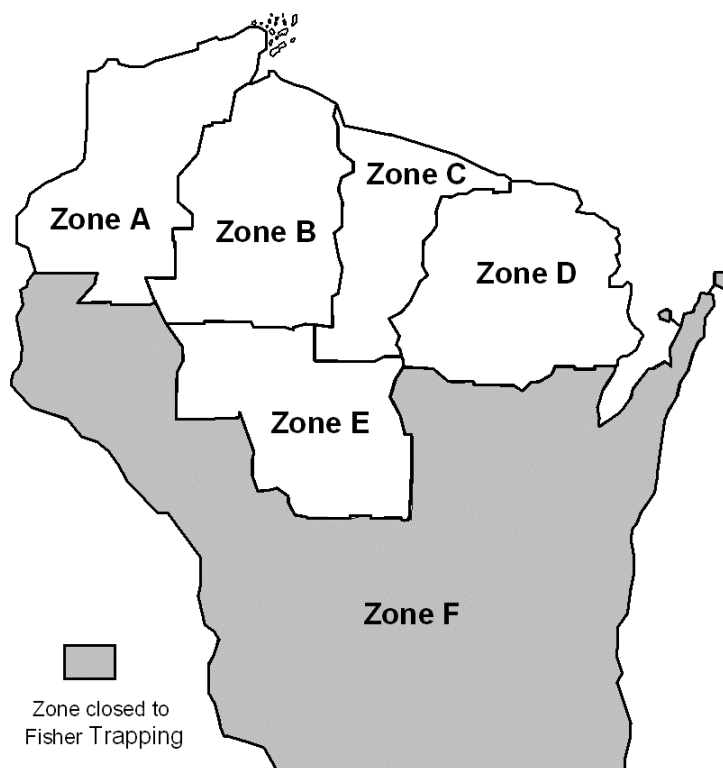
Canine teeth were obtained from 899 of the 1,701 fishers harvested in the 2001 season. Eighteen of the 40 fishers harvested in Zone E in 2002 were aged. Ages have been obtained from 8,052 fishers harvested since 1985 (Table 1). Age distributions have been similar between sexes. On average, juveniles have comprised approximately 50% of the fishers harvested, yearlings 25%, and adults 25%.

The WDNR set a statewide population goal of 9,200 fishers (1 per 2 square miles of habitat) in 1997 due to strong public opposition to the high fisher population. There were approximately 10,600 fishers in the state at that time (Table 2). The 1997 fisher harvest (3,644) far exceeded our harvest goal resulting in an estimated population for 1998 about 15% below the recently established population goal. Conservative harvests in 1998 (494 fishers), 1999 (721) and 2000 (676) allowed the population to rebound. Our fisher population model produced estimates for fall 2003 of approximately 1,700 fishers in Zone A, 3,000 in Zone B, 1,500 in Zone C, and 2,700 in Zone D. Fisher populations are now near the population goal in all Fisher Management Zones.

The WDNR Furbearer Advisory Committee recommended harvest goals for 2003 of 450 fishers in Zone A, 420 in Zone B, 320 in Zone C, and 440 in Zone D. The Committee also recommended a minimal harvest of 30 fishers in Zone E. If achieved, these harvests should maintain the population at or near goals in all Fisher Management Units.

### **Literature Cited**

- Jenks, J. A., and R. T. Bowyer. 1984. Sex and age-class determination for fisher using radiographs of canine teeth. *J. Wildl. Manage.* 48(2):626-628.
- Kohn, B. E., N. F. Payne, J. E. Ashbrenner, and W. A. Creed. 1993. The fisher in Wisconsin. *Wis. Dep. Nat. Resour. Tech. Bull* 183. 24 pp.



**Figure 1.** Wisconsin's Fisher Management Zones open to trapping, 2002. Zone E was opened to trapping in 2000 for the first time since fishers were reintroduced.

**Table 1.** Ages of fishers harvested in Wisconsin, 1985-2002.

Year	No. Aged	Percent in Age Class					
		Females			Males		
		Juv.	Ylg.	Adult	Juv.	Ylg.	Adult
1985-89	919	43	28	29	53	18	29
1990	271	49	34	17	50	27	23
1991	167	49	27	23	47	21	32
1992	1,420	52	25	23	51	26	24
1993	1,172	39	30	31	51	25	24
1994	1,158	55	24	22	54	24	22
1995	821	51	28	22	55	27	18
1996	0						
1997	0						
1998	247	55	31	14	65	18	18
1999	431	44	30	26	52	31	17
2000	529	44	30	26	47	31	22
2001	899	37	28	35	44	27	29
2002 <sup>a</sup>	18	75	0	25	40	30	30

<sup>a</sup> Only fishers harvested in Zone E were aged.

**Table 2.** *Zone-specific fisher population estimates and trends, 1984-2003.*

Year	Fisher Management Zones				Total
	A	B	C	D	
1984	900	1,400	600	1,100	4,000
1985	1,100	1,700	700	1,300	4,800
1986	1,200	1,900	900	1,600	5,600
1987	1,400	2,200	1,000	1,800	6,400
1988	1,400	2,500	1,200	2,000	7,100
1989	1,400	2,900	1,300	2,300	7,900
1990	1,400	3,200	1,600	2,500	8,700
1991	1,600	3,600	1,800	2,900	9,900
1992	1,800	4,100	2,100	3,300	11,300
1993	1,800	4,000	2,200	3,300	11,300
1994	1,700	3,800	2,300	3,300	11,100
1995	1,700	3,800	2,200	2,900	10,600
1996	1,700	3,800	2,100	2,900	10,500
1997	1,700	3,900	2,100	2,900	10,600
1998	1,500	2,600	1,400	2,000	7,500
1999	1,700	2,800	1,600	2,200	8,300
2000	1,800	3,000	1,600	2,400	8,800
2001	2,000	3,300	1,700	2,800	9,800
2002	1,900	3,100	1,600	2,800	9,400
2003	1,700	3,000	1,500	2,700	8,900
GOAL	1,700	3,200	1,600	2,700	9,200